GORDON
COLLEGE

EDU 614 Technology For All Students

Spring 2022

Instructor: Nathan Seavey

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Office hours: I am generally available each week before class at 5:15. Please let me know you are coming via email, and what you need to speak about.

Class Time: Wednesdays: April 6th –June 22, 6:00–9:00 p.m.

No class Wed, April 20

Zoom link will be emailed to you prior to start of class.

Website: http://techedseavey.blogspot.com/

Room: ONLINE

Overarching Objective: How do we effectively use technology to achieve our educational goals?

Understanding that teachers will progress on each standard throughout their career, the *Professional Standards for Teachers* (PST) and indicators describe the level of practice that candidates should demonstrate by the time they complete their teacher preparation program and are endorsed for licensure. The diagram below defines each level of practice and what it means for teacher candidates during their preparation:

Introduction	*Candidates show understanding through coursework and/or in field-based experiences.*
Practice	*Candidates have opportunities to practice, be observed, and to receive feedback through coursework and/or in field-based experiences*
Demonstrate	*Candidates consistently demonstrate competency through coursework and in field-based experiences as measured by the teacher performance assessment (CAP).*

III. Family and Community Engagement Standard: Promotes the learning and growth of all students through effective partnerships with families, caregivers, community members, and organizations.	

III-B. Collaboration: Collaborates with families to create and implement strategies for supporting student learning and development both at home and at school.	
III-B-2 Curriculum Support: Regularly updates parents on curriculum throughout the year and suggests strategies for supporting learning at school and home, including appropriate adaptation for students with disabilities or limited English proficiency.	Family communication assignment with rubric; Final Project and Presentation with rubric
III-C Communication indicator: Engages in regular, two-way, and culturally proficient communication with families about student learning and performance.	
III-C-1. Two-Way Communication: Regularly uses two-way communication with families about student performance and learning and responds promptly and carefully to communications from families.	Family communication assignment with rubric; Final Project and Presentation with rubric

The following PST are assessed at the *Introduction* level in this course:

Standard Indicator	Assessment Evidence
Standard II: Teaching All Students. The teacher promotes the learning and growth of all students through instructional practices that establish high expectations, create a safe and effective classroom environment, and demonstrate cultural proficiency. **II-D Expectations:** Plans and implements lessons that set clear and high expectations and also make knowledge accessible for all students.	Literature Circles
II-D-3. Access to Knowledge: Consistently adapts instruction, materials, and assessments to make challenging material accessible to all students, including English learners and students with disabilities.	Boardmaker assignment with rubric; Final Project and Presentation with rubric

Subject Matter Objectives included at the end of the document.

Course schedule

Additional Objectives

The students will:

a. Understand ethical and social issues surrounding privacy and copyright relating to educational technology and resources.
b. Use resources for adaptive/assistive devices that provide access for all students.
c. Learn about and use various software applications for use in the classroom.
d. Learn and demonstrate basic troubleshooting skills.

Course Text:

November, Alan. *Who Owns the Learning?* Solution Tree Press 2012

ATTENDANCE:

Attendance is required at each class. In the event of illness or emergencies, the students must contact the instructor prior to class, by email.

All content subject to change depending on students' needs in this particular class.

Date	During Class	Assignments to do after the class:
Class one	**Welcome/ Syllabus review/ Objective setting** **How broad is tech?**	**Check The blog** **Sugata Mitra TED talk One.**
Class two	**Concepts of Tech in Education- TEACHER ADMIN** **Google- Google Docs Admin** **Computer Safety**	**Read Chapter 1 in November, Alan. *Who Owns the Learning?*** **Weekly App Practical 1**
Class Three	Students as Tutorial Designers	**Read Chapter 2 in November, Alan. *Who Owns the Learning?*** Read Chapter 3 in November, Alan. *Who Owns the Learning?* Weekly App Practical 2
Class four	Students as Scribes	Read Chapter 4 in November, Alan. *Who Owns the Learning?* Weekly App Practical 3
Class Five	Students as Researchers	Read Chapter 5 in November, Alan. *Who Owns the Learning?* Weekly App Practical 4
Class Six	Students as Communicators and Collaborators/ Global citizen	Read Chapter 6 in November, Alan. *Who Owns the Learning?*

		Weekly App Practical 5
Class Seven	Assessment	Weekly App Practical 7
Class eight	Classroom Management and Technology	Weekly App Practical 9 (Classroom management) Growth Plan
June 8	Technology and the Different Learner:Assistive Technology Boardmaker	Weekly App Practical 8 “Designing an Inclusive classroom”
June 15	Parent Communication (Ergonomics/ Bullying) Hardware/ How to get	Parent communication platform Blog Growth plan
June 22	Work independently	
June 29th	Presentations	Final presentations due Final draft of all WAP due Growth Plan due

EDU 614 Course Requirements and Assessment descriptions

Below find the four main assessments of this course. 1. Participation. 2. Weekly App Practical, 3. Growth Plan, 4. Final Portfolio Presentation.

10% Participation:

Students are expected to be engaged, active learners in all aspects of the course.

- Preparation for and participation in class are critical.Timely submission of assignments is expected.
- If you fail to honor these guidelines your participation grade will be lowered.
- Attendance is required. Any absences will affect your participation grade.

30% Weekly App Practicals

Description: These are weekly installments that demonstrate you have a degree of competence with an app that fits that weeks genre. The best way to meet this goal is to **dedicate a blog entry** to your answer. It may take the form of teaching someone else to use it, or a simple explanation of how you would use it.
See the Rubric for additional details.

Reflection is a key part of this as well as demonstration of the practical use of the app.

You will have 9 Weekly App Practicals: From Alan November

Tech For Admin tasks (Classroom/EDFS/Communication)	**Student Tutorial Designers (and presentation tools)**	**Student Scribes (Documentation, sharing)**
Student Researchers (Web search protocols, collecting notes, Information in, extending learning)	**Student Global Communicators (Connectivity, social connection)**	~~**Parent/ Community Relations**~~
Assessment	**Assistive Technology** ~~**Boardmaker**~~	**Classroom Management**

Weekly App Practical Rubric:

Mark	**A:Knowledge**	**B: Application**	**C: Reflection on practice**
1-2	Demonstrates **surface** level knowledge of application.	No demonstration of integrating tech into lesson, unit, classroom structure and/or school structure.	**No mention of** what problems may arise. **No mention of** how app would be rolled out to students.
3-4	Demonstrates **adequate** knowledge of application.	Demonstrates how to **somewhat** integrate into lesson, unit, classroom structure and/or school structure.	**Mentions** what problems may arise. **Mentions** how app would be rolled out to students.
5-6	Demonstrates **competency** in using application.	Demonstrates how to **mostly** integrate into lesson, unit, classroom structure and/or school structure.	**States** what problems may arise and how to overcome them. **States** how app would be rolled out to students.
7-8	Demonstrates **mastery** of application. **Connects** with other teachers using the idea, or app developers to push the envelope.	Demonstrates how to **fully** integrate into lesson, unit, classroom structure and/or school structure.	**Explains** what problems may arise and how to overcome them. **Explains** how app would be rolled out to students. **Connects** to larger education picture.

30% Growth Plan

Description: Here, students will articulate a plan to keep themselves up to date on the latest technology. This may include any viable, demonstrable plan. Should be posted on their blog.

Knowledge

Are specific sources/processes/methods explained in detail?

(examples: RSS, online subscription services, online or hard copy periodicals, educational conventions)

Design

Is the plan presented clearly?

Does the student explain how this plan works well for them?

Research

Are sources cited?

Are a range of sources considered?

Mark/ Criterion	Knowledge	Design	Research
1-2	Specific sources/processes/methods are **not mentioned**.	The plan is presented with **no** clarity. The student demonstrates a **limited** link between their plan and their work process.	**No** sources are cited in proper format. The student uses **little or no** range of sources.
3-4	Specific sources/processes/methods are **listed**.	The plan is presented with a **basic** structure. The student demonstrates a **basic** link between their plan and their work process.	**Some** sources are cited in proper format. The student uses a **limited** range of **proper and improper** sources.
5-6	Specific sources/processes/methods are **outlined**.	The plan is presented with **developed** structure The student demonstrates an **adequate** link between their plan and their work process.	**Most** sources are cited in proper format. The student uses a **adequate** range of **proper** sources.
7-8	Specific sources/processes/methods are **explained**.	The plan is presented with **detailed** structure. The student demonstrates a **detailed** link between their plan and their work process.	**All** sources are cited in proper format. The student uses a **wide** range of **proper** sources.

30% Final Portfolio Presentation

Description: Students will present a Classroom Upgrade Plan. It will take the form of a 5-10 minute presentation to the class. If a defined audience would be helpful for you, think of this as a presentation to a hiring committee at a school district. Or as a pitch to your current administrators as to how you'd like to structure your classroom.

Presentation should include:

1. A design for all of the categories we have explored and how and why they fit into your classroom and work together to create a 21st century classroom.
2. Detailed plan of materials, partnerships, hardware and software that you might need.
3. A powerpoint or other presentation medium that can be reviewed at a later time.

It is important to remember that much of this stuff you will be working on from the beginning of class and that it is right and proper to go back and see what you have learned and simply organize it into a presentation. Though there are some things you may have to create specifically for the presentation.

Final project rubric:

Knowledge

Does the student demonstrate knowledge of the apps and technology described?

Does the student demonstrate a wide degree of knowledge about currently available apps and tech?

Application

Are the apps and tech design applied as an integrated whole?

Does the student apply apps and tech across all aspects of the teacher's role?

Are all aspects of tech in the classroom addressed in the portfolio?

Organization

Is the presentation well organized according to the conventions of the chosen media?

Reflection

Does the student connects the elements of the course, their experience (or future experience in the classroom) to the technology principles discussed in class?

Does the student demonstrate growth during the course?

Final Presentation Rubric

Criterion Mark	Knowledge	Application	Organization	Reflection
1-2	-Student demonstrates **limited** knowledge of the apps and technology described. -Student demonstrates a **limited** degree of knowledge about currently available apps and tech.	The apps and tech design is applied as a **opposes** a**n i**ntegrated whole. Apps and tech are applied across **limited** aspects of the teacher's role. **No** aspects of tech in the classroom are addressed in the portfolio.	The presentation is **not** within the conventions of the chosen media	The student connects **some** the elements of the course, their experience or future experience in the classroom to **some** the technology principles discussed in class. The student demonstrates **little** growth during the course
3-4	-Student demonstrates **some** knowledge of the apps and technology described. -Student demonstrates a **some** degree of knowledge about currently available apps and tech.	-The apps and tech design is applied as a **disjointed from** the whole. -Apps and tech are applied across **some** aspects of the teacher's role. **-Some** aspects of tech in the classroom are addressed in the portfolio.	The presentation is **somewhat** within the conventions of the chosen media	Many/ many The student connects **many** the elements of the course, their experience or future experience in the classroom to **many** the technology principles discussed in class. The student demonstrates **some** growth during the course
5-6	Student demonstrates **adequate** knowledge of the apps and technology described. -Student demonstrates an **adequate** degree of knowledge about currently available apps and tech.	-The apps and tech design is applied as a **mostly i**ntegrated whole. -Apps and tech are applied across **many** aspects of the teacher's role. **-Many** aspects of tech in the classroom are addressed in the portfolio.	The presentation is **mostly** within the conventions of the chosen media.	The student connects all the elements of the course, their experience or future experience in the classroom to **most** the technology principles discussed in class. The student demonstrates **adequate** growth during the course.
7-8	Student demonstrates **masterful** knowledge of the apps and technology described. -Student demonstrates a **significant** degree of knowledge about currently available apps and tech.	-The apps and tech design is applied as a **fully i**ntegrated whole. -Apps and tech are applied across **all** aspects of the teacher's role. -**All** aspects of tech in the classroom are addressed in the portfolio.	The presentation is **fully** within the conventions of the chosen media	The student connects all the elements of the course, their experience or future experience in the classroom to **all** the technology principles discussed in class. The student demonstrates **significant** growth during the course

FInal presentation example outline (This should not be considered prescriptive, but as a guide)

I. Introduce your classroom
II. Your philosophy of Education for the Future classroom
III. Explain how your classroom will be run
IV. Conclude with a reflection on your growth.

Accommodations Statement for Students with Documented Disabilities in the Graduate Program:

The Academic Support Center (ASC), in accordance with Section 504 of the Rehabilitation Act of 1973, provides students with disabilities equivalent access that enables them to receive an education equal to that of their non-disabled peers. Gordon provides basic support services and reasonable accommodations for students with documented disabilities. Any student with a documented disability who intends to request such services must provide to the Academic Support Center written comprehensive clinical documentation from a specialist; this should be done prior to registration. Testing must be current (i.e., completed within the past three years), provide clear and specific evidence and identification of the disability, and verify accommodation needs with specific academic recommendations (e.g., extended test time, note taking assistance). A statement of the College's disability policy is given in the Graduate Academic Catalog.

Grievance Procedures: The Academic Support Center works interactively with students and faculty to resolve any accommodation issues. Any questions or disputes about accommodations should be immediately referred to the Academic Support Center. For additional information contact the graduate office or the Academic Support Center.

Academic Dishonesty Statement: Academic dishonesty is regarded as a major violation of both the academic and spiritual principles of this community and may result in a failing grade or suspension. Academic dishonesty includes plagiarism, (see Plagiarism statement below from Student Handbook), cheating (whether in or out of the classroom), and abuse or misuse of library materials when such abuse or misuse can be related to course requirements.

Plagiarism: Plagiarism occurs when a sequence of ideas is transferred from a source to a paper without the process of digestion, integration and reorganization in the writer's mind, and without acknowledgment in the paper.

Plagiarism is committed if students submit as their own work:

1. Part or all of a written or spoken assignment copied from another person's manuscript or notes;
2. Part or all of an assignment copied or paraphrased from a source such as a book, magazine or pamphlet;
3. The sequence of ideas, arrangement of material or pattern of thought of someone else, even though they are expressed in one's own words.

A student is an accomplice of plagiarism and equally guilty if:

1. One's paper, in outline or finished form, is allowed to be copied and submitted as the work of another;
2. One prepares a written assignment for another student;

3. One keeps or contributes to a file of papers or speeches with the clear intent that these papers or speeches be copied and submitted as the work of anyone other than the author.

INCLEMENT WEATHER:

In the event of inclement weather or other emergency situations, here is how you can find out if Graduate Education classes are cancelled:

1) Graduate Education Emergency Phone Line: 978-867-4320
   If a decision is made to cancel graduate classes, a message will be recorded on this phone line. (You may want to save this number into your cell phones now!) Please note, this number is just for graduate classes. Graduate classes may be cancelled even if Gordon College remains open.
2) Gordon College Closings:
   If Gordon College is closed, graduate classes are automatically cancelled. Messages about Gordon will be posted:
   - On the front page of the Gordon website: www.gordon.edu
   - On local radio and TV stations
   - On Gordon's Inclement Weather and Emergency Hotline: 978-867-3600

It is possible that Gordon may cancel day classes but not evening classes. In this situation, a message will be recorded about the status of evening classes on the Graduate Education Emergency Phone Line.

During periods of inclement weather, please check Blackboard and your email for a message from your professor about class assignments.

Subject Matter Knowledge Objectives

These content areas, described in the Digital Literacy and Computer Science Curriculum Framework, (http://www.doe.mass.edu/frameworks/dlcs.pdf) are supported by work in this course. In general, the Computing and Society Strand and the Digital Tools and Collaboration Strand are completely covered, grades K-12, while Computing Systems and Computational thinking strands are only marginally represented.

Kindergarten – Grade 2: Computing and Society (CAS)

K-2.CAS.a	**Safety and Security**
K-2.CAS.a.1	Demonstrate proper ergonomics (e.g., body position, stretching) when using devices.
K-2.CAS.a.2	Use electrical devices safely and in moderation (e.g., unplug devices by pulling the plug rather than the cord, do not mix water/food and electric devices, avoid gaming and walking).
K-2.CAS.a.3	Care for devices appropriately (e.g., handling devices gently, completely shutting down devices when not in use, storing devices in the appropriate container).
K-2.CAS.a.4	Explain that a password helps protect the privacy of information.
K-2.CAS.a.5	Identify safe and unsafe examples of online communications.
K-2.CAS.a.6	Explain why we keep personal information (e.g., name, location, phone number, home address) private.
K-2.CAS.a.7	Identify which personal information (e.g., user name or real name, school name or home address) should and should not be shared online and with whom.
K-2.CAS.a.8	Explain why it is necessary to report inappropriate electronic content or contact.
K-2.CAS.b	**Ethics and Laws**
K-2.CAS.b.1	Define good digital citizenship as using technology safely, responsibly, and ethically.
K-2.CAS.b.2	Demonstrate responsible use of computers, peripheral devices, and resources as outlined in school rules (Acceptable Use Policy [AUP] for K-2).
K-2.CAS.b.3	Explain that most digital artifacts have owners.
K-2.CAS.b.4	Explain the importance of giving credit to media creators/owners when using their work.
K-2.CAS.c	**Interpersonal and Societal Impact**
K-2.CAS.c.1	Identify and describe how people (e.g., students, parents, police officers) use many types of technologies in their daily work and personal lives.
K-2.CAS.c.2	Recognize when the purpose of content is to provide information or to influence you to act.

Kindergarten – Grade 2: **Digital Tools and Collaboration (DTC)**

K-2.DTC.a	**Digital Tools**
K-2.DTC.a.1	Operate a variety of digital tools (e.g., open/close, find, save/print, navigate, use input/output devices).
K-2.DTC.a.2	Identify, locate, and use letters, numbers, and special keys on a keyboard (e.g., Space Bar, Shift, Delete).
K-2.DTC.a.3	Create a simple digital artifact.
K-2.DTC.a.4	Use appropriate digital tools individually and collaboratively to create, review, and revise simple artifacts that include text, images and audio.
K-2.DTC.b	**Collaboration and Communication**
K-2.DTC.b.1	Collaboratively use digital tools and media resources to communicate key ideas and details in a way that informs, persuades, and/or entertains.
K-2.DTC.b.2	Use a variety of digital tools to exchange information and feedback with teachers.
K-2.DTC.b.3	Use a variety of digital tools to present information to others.
K-2.DTC.c	**Research**
K-2.DTC.c.1	Conduct basic keyword searches to gather information from teacher-provided digital sources (e.g., online library catalog, databases).
K-2.DTC.c.2	Create an artifact individually and collaboratively that answers a research question, while clearly expressing thoughts and ideas.
K-2.DTC.c.3	Acknowledge and name sources of information or media (e.g., title of book, author of book, website).

Grades 3 – 5: Computing and Society (CAS)

3-5.CAS.a	**Safety and Security**
3-5.CAS.a.1	Describe how to use proper ergonomics (e.g., body position, lighting, positioning of equipment, taking breaks) when using devices.
3-5.CAS.a.2	Describe the threats to safe and efficient use of devices (e.g., SPAM, spyware, phishing, viruses) associated with various forms of technology use (e.g., downloading and executing software programs, following hyperlinks, opening files).
3-5.CAS.a.3	Identify appropriate and inappropriate uses of technology when posting to social media, sending e-mail or texts, and browsing the Internet.
3-5.CAS.a.4	Explain the proper use and operation of security technologies (e.g., passwords, virus protection software, spam filters, popup blockers, cookies).
3-5.CAS.a.5	Describe ways to employ safe practices and avoid the potential risks/dangers associated with various forms of online communications, downloads, linking, Internet purchases, advertisements, and inappropriate content within constrained environments.
3-5.CAS.a.6	Identify different types of cyberbullying (e.g., harassment, flaming, excluding people, outing, and impersonation).
3-5.CAS.a.7	Explain that if you encounter cyberbullying or other inappropriate content, you should immediately tell a responsible adult (e.g., teacher, parent).
3-5.CAS.b	**Ethics and Laws**
3-5.CAS.b.1	Demonstrate responsible use of computers, peripheral devices, and resources as outlined in school rules (Acceptable Use Policy [AUP]).
3-5.CAS.b.2	Describe the difference between digital artifacts that are open or free and those that are protected by copyright.
3-5.CAS.b.3	Explain the guidelines for the fair use of downloading, sharing, or modifying of digital artifacts.
3-5.CAS.b.4	Describe the purpose of copyright and the possible consequences for inappropriate use of digital artifacts that are protected by copyright.
3-5.CAS.b.5	Explain that laws exist (e.g., Section 508, Telecommunication Act of 1996) that help ensure that people with disabilities can access electronic and information technology.
3-5.CAS.c	**Interpersonal and Societal Impact**
3-5.CAS.c.1	Explain the different forms of web advertising (e.g., search ads, pay-per-click ads, banner ads, targeted ads, in-game ads, e-mail ads).
3-5.CAS.c.2	Explain why websites, digital resources, and artifacts may include advertisements and collect personal information.
3-5.CAS.c.3	Define the digital divide as unequal access to technology on the basis of differences, such as income, education, age, and geographic location.
3-5.CAS.c.4	Use critical thinking to explain how access to technology helps empower individuals and groups (e.g., gives them access to information, the ability to communicate with others around the world, allows them to buy and sell things).
3-5.CAS.c.5	Identify resources in the community that can give people access to technology (e.g., libraries, community centers, education programs, schools, hardware/software donation programs).
3-5.CAS.c.6	Identify ways in which people with disabilities access and use technology (e.g., audio players and recorders, FM listening systems, magnifiers).
3-5.CAS.c.7	Identify the impact of social media and cyberbullying on individuals, families, and society.

Grades 3 – 5: **Digital Tools and Collaboration (DTC)**

3-5.DTC.a	**Digital Tools**
3-5.DTC.a.2	Navigate between local, networked, or online/cloud environments and transfer files between each (upload/download).
3-5.DTC.a.3	Use digital tools (local and online) to manipulate and publish multimedia artifacts.
3-5.DTC.b	**Collaboration and Communication**
3-5.DTC.b.1	Communicate key ideas and details individually or collaboratively in a way that informs, persuades, and/or entertains using digital tools and media-rich resources.
3-5.DTC.b.2	Collaborate through online digital tools under teacher supervision.
3-5.DTC.c	**Research**
3-5.DTC.c.1	Identify digital information sources to answer research questions (e.g., online library catalog, online encyclopedias, databases, websites).
3-5.DTC.c.2	Perform searches to locate information using two or more key words and techniques to refine and limit such searches.
3-5.DTC.c.3	Evaluate digital sources for accuracy, relevancy, and appropriateness.
3-5.DTC.c.4	Gather and organize information from digital sources by quoting, paraphrasing, and/or summarizing.
3-5.DTC.c.5	Create an artifact that answers a research question and clearly communicates thoughts and ideas.
3-5.DTC.c.6	Cite text-based sources using a school- or district-adopted format.
3-5.DTC.c.7	Provide basic source information (e.g., Uniform Resource Locator [URL], date accessed) for non-text-based sources (e.g., images, audio, video).

Grades 6 – 8:Computing and Society (CAS)

6-8.CAS.a	**Safety and Security**
6-8.CAS.a.1	Identify threats and actively protect devices and networks from viruses, intrusion, vandalism, and other malicious activities.
6-8.CAS.a.2	Describe how cyberbullying can be prevented and managed.
6-8.CAS.a.3	Explain the connection between the persistence of data on the Internet, personal online identity, and personal privacy.
6-8.CAS.a.4	Describe and use safe, appropriate, and responsible practices (netiquette) when participating in online communities (e.g., discussion groups, blogs, social networking sites).
6-8.CAS.a.5	Differentiate between appropriate and inappropriate content on the Internet.
6-8.CAS.b	**Ethics and Laws**
6-8.CAS.b.1	Explain how copyright law and licensing protect the owner of intellectual property.
6-8.CAS.b.2	Explain possible consequences of violating intellectual property law and plagiarism.
6-8.CAS.b.3	Apply fair use for using copyrighted materials (e.g., images, music, video, text).
6-8.CAS.b.4	Identify the legal consequences of sending or receiving inappropriate content (e.g., cyberbullying, harassment, sexting).
6-8.CAS.b.5	Differentiate among open source and proprietary software licenses and their applicability to different types of software and media.
6-8.CAS.b.6	Demonstrate compliance with the school's Acceptable Use Policy [AUP].
6-8.CAS.b.7	Identify software license agreements and application permissions.
6-8.CAS.b.8	Explain positive and malicious purposes of hacking.
6-8.CAS.b.9	License original content and extend license for sharing in the public domain (e.g., creative commons).
6-8.CAS.c	**Interpersonal and Societal Impact**
6-8.CAS.c.1	Describe current events and emerging technologies in computing and the effects they may have on education, the workplace, individuals, communities, and global society.
6-8.CAS.c.2	Identify and discuss the technology proficiencies needed in the classroom and the workplace, and how to meet the needs.
6-8.CAS.c.3	Relate the distribution of computing resources in a global society to issues of equity, access, and power.
6-8.CAS.c.4	Evaluate how media and technology can be used to distort, exaggerate, and misrepresent information.
6-8.CAS.c.5	Evaluate the bias of digital information sources, including websites.

Grades 6 – 8: **Digital Tools and Collaboration (DTC)**

6-8.DTC.a	**Digital Tools**
6-8.DTC.a.1	Identify and explain the strengths, weaknesses, and capabilities of a variety of digital tools.
6-8.DTC.a.2	Identify the kinds of content associated with different file types and why different file types exist (e.g., formats for word processing, images, music, three-dimensional drawings.).
6-8.DTC.a.4	Individually and collaboratively use advanced tools to design and create online content (e.g., digital portfolio, multimedia, blog, webpage).
6-8.DTC.b	**Collaboration and Communication**
6-8.DTC.b.1	Communicate and publish key ideas and details individually or collaboratively in a way that informs, persuades, and/or entertains using a variety of digital tools and media-rich resources.

Grades 9 – 12: Computing and Society (CAS)

9-12.CAS.a	**Safety and Security**
9-12.CAS.a.1	Evaluate and design an ergonomic work environment.
9-12.CAS.a.2	Explain safe practices when collaborating online, including how to anticipate potentially dangerous situations.
9-12.CAS.a.3	Construct strategies to combat cyberbullying/harassment.
9-12.CAS.a.4	Identify the mental health consequences of cyberbullying/harassment.
9-12.CAS.a.5	Explain how peer pressure in social computing settings influences choices.
9-12.CAS.a.6	Apply strategies for managing negative peer pressure and encouraging positive peer pressure.
9-12.CAS.b	**Ethics and Laws**
9-12.CAS.b.1	Model mastery of the school's Acceptable Use Policy [AUP].
9-12.CAS.b.2	Identify computer-related laws and analyze their impact on digital privacy, security, intellectual property, network access, contracts, and consequences of sexting and harassment.
9-12.CAS.b.3	Discuss the legal and ethical implications associated with malicious hacking and software piracy.
9-12.CAS.b.4	Interpret software license agreements and application permissions.
9-12.CAS.c	**Interpersonal and Societal Impact**
9-12.CAS.c.1	Explain the impact of the digital divide on access to critical information.
9-12.CAS.c.2	Discuss the impact of computing technology on business and commerce (e.g., automated tracking of goods, automated financial transaction, e-commerce, cloud computing).
9-12.CAS.c.3	Describe the role that assistive technology can play in people's lives.
9-12.CAS.c.4	Create a digital artifact that is designed to be accessible (e.g., closed captioning for audio, alternative text for images).
9-12.CAS.c.5	Analyze the beneficial and harmful effects of computing innovations (e.g., social networking, delivery of news and other public media, intercultural communication).
9-12.CAS.c.6	Cultivate a positive web presence (e.g., digital resume, portfolio, social media).
9-12.CAS.c.7	Identify ways to use technology to support lifelong learning.
9-12.CAS.c.8	Analyze the impact of values and points of view that are presented in media messages (e.g., racial, gender, political).
9-12.CAS.c.9	Discuss the social and economic implications associated with malicious hacking, software piracy, and cyber terrorism.

Grades 9 – 12: **Digital Tools and Collaboration (DTC)**

9-12.DTC.a	**Digital Tools**
9-12.DTC.a.1	Use digital tools to design and develop a significant digital artifact (e.g., multipage website, online portfolio, simulation).
9-12.DTC.a.2	Select digital tools or resources based on their efficiency and effectiveness to use for a project or assignment, and justify the selection.
9-12.DTC.b	**Collaboration and Communication**
9-12.DTC.b.1	Communicate and publish key ideas and details to a variety of audiences using digital tools and media-rich resources.

3-5.CAS.a.1	Describe how to use proper ergonomics (e.g., body position, lighting, positioning of equipment, taking breaks) when using devices.
3-5.CAS.a.2	Describe the threats to safe and efficient use of devices (e.g., SPAM, spyware, phishing, viruses) associated with various forms of technology use (e.g., downloading and executing software programs, following hyperlinks, opening files).
3-5.CAS.a.3	Identify appropriate and inappropriate uses of technology when posting to social media, sending e-mail or texts, and browsing the Internet.
3-5.CAS.a.4	Explain the proper use and operation of security technologies (e.g., passwords, virus protection software, spam filters, popup blockers, cookies).
3-5.CAS.a.5	Describe ways to employ safe practices and avoid the potential risks/dangers associated with various forms of online communications, downloads, linking, Internet purchases, advertisements, and inappropriate content within constrained environments.

3-5.CAS.c.1	Explain the different forms of web advertising (e.g., search ads, pay-per-click ads, banner ads, targeted ads, in-game ads, e-mail ads).
3-5.CAS.c.2	Explain why websites, digital resources, and artifacts may include advertisements and collect personal information.

3-5.CAS.c.3	Define the digital divide as unequal access to technology on the basis of differences, such as income, education, age, and geographic location.
3-5.CAS.c.4	Use critical thinking to explain how access to technology helps empower individuals and groups (e.g., gives them access to information, the ability to communicate with others around the world, allows them to buy and sell things).
3-5.CAS.c.5	Identify resources in the community that can give people access to technology (e.g., libraries, community centers, education programs, schools, hardware/software donation programs).

6-8.CAS.a.2	Describe how cyberbullying can be prevented and managed.